

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) In a computer graphics system, a method for applying texture mapping in per-pixel operations, the method comprising:
 - receiving a plurality of parameters that are used to define a pixel value at a pixel in a primitive;
 - selecting at least one parameter parameters from the plurality of parameters to generate selected parameters and unselected parameters where the unselected parameters are the plurality of parameters that are not selected;
 - substituting a texture value from a texture map in place of a values produced from an algorithm that uses the selected at least one parameter parameters to determine a pixel value;
 - determining a texture value for each of the selected parameters by accessing a set of textures, the texture value for the selected parameters varying over the primitive; and
 - determining the pixel value by using the unselected parameters and the texture values over the primitive, wherein the set of unselected parameters are not texture values and the texture values are associated with the selected parameters.
2. (Previously Presented) The method as recited in claim 1, further comprising: displaying the pixel according to the determined pixel value on a display device.
3. (Original) The method as recited in claim 1, wherein the plurality of parameters includes per-primitive parameters, which are defined over the entire primitive.
4. (Original) The method as recited in claim 1, wherein the primitive is a polygon.
5. (Original) The method as recited in claim 1, wherein the plurality of parameters includes both scalar and vector parameters.

6. (Original) The method as recited in claim 3, wherein the plurality of parameters includes one or more of emission material color, ambient material color, global ambient light color, attenuation factor, ambient light color, diffuse material color, diffuse light color, specular material color, specular light color, a surface normal vector, a specular exponent, an environment map color, and a shadow color.

7. (Original) The method as recited in claim 1, wherein the operation of determining the texture value further comprises the operations of:

receiving texture coordinates for accessing the set of textures; and
accessing the textures in response to the texture coordinates to generate the texture values.

8. (Original) The method as recited in claim 7, wherein the accessed texture includes a plurality of texture elements, the method of further comprising the operation of:
filtering the accessed texture elements of the texture map onto the selected pixel to generate the texture value associated with the pixel.

9. (Original) The method as recited in claim 1, wherein a light value is generated for the pixel value by evaluating a lighting equation that is defined in terms of the plurality of parameters.

10. (Currently amended) A device for generating per-pixel values of pixels in a primitive by using texture parameters, the pixel values of the pixels in the primitive being defined by a plurality of parameters, the device comprising:

a texture memory for storing a set of texture maps;
a texture unit for receiving texture coordinates for accessing a set of selected texture maps in the texture memory, the set of selected texture maps being associated with a set of a selected parameters corresponding to a selected parameter in the pixels in the primitive, wherein the selected parameter is selected from among the plurality of parameters that define a pixel value in the primitive, the texture unit generating a texture value associated with the pixel from each of the selected texture maps, and wherein an other parameter in the plurality

of parameters is not selected and the parameters that are parameter that is not selected from the plurality of parameters defines a set of unselected parameters; and

a rendering unit for generating the pixel value in response to the texture values of the selected parameters and to the unselected parameters.

11. (Original) The device as recited in claim 10, wherein the primitive is a polygon.

12. (Original) The device as recited in claim 10, wherein one or more of the selected parameters are selected from a parameter group consisting of emission material color, ambient material color, global ambient light color, attenuation factor, ambient light color, diffuse material color, diffuse light color, specular material color, specular light color, a surface normal vector, a specular exponent, an environment map color, and a shadow color.

13. (Original) The device as recited in claim 10, wherein the plurality of parameters includes both scalar and vector parameters.

14. (Original) The device as recited in claim 10, wherein the pixel value is a light value that is generated by evaluating a lighting equation using the plurality of parameters.

15. (Currently amended) A computer graphics system for generating per-pixel values for pixels in a primitive by using texture parameters, the pixel values being defined by a plurality of parameters, the system comprising:

a bus;

a processor coupled to the bus;

a main memory coupled to the bus;

a storage unit coupled to the bus; and

a graphics subsystem coupled to receive a plurality of parameters defining the pixel values for the pixels in the primitive, the graphics subsystem including:

means of selecting at least one parameter parameters from the plurality of parameters to generate selected parameters and unselected parameters where the unselected parameters are the plurality of parameters that are not selected;

substituting a texture value from a texture map in place of a values produced from an algorithm that uses the selected ~~at least one parameter~~ parameters to determine a pixel value;

means for determining a texture value for each of the selected parameters by accessing a set of textures, the texture value for the selected parameters varying over the primitive; and

means for determining the pixel value by using the unselected parameters and the texture values over the primitive, wherein the set of unselected parameters are not texture values and the texture values are associated with the selected parameters.

16. (Original) The system as recited in claim 15, wherein one or more of the selected parameters are selected from a parameter group consisting of emission material color, ambient material color, global ambient light color, attenuation factor, ambient light color, diffuse material color, diffuse light color, specular material color, specular light color, a surface normal vector, a specular exponent, an environment map color, and a shadow color.

17. (Original) The system as recited in claim 15, wherein the plurality of parameters includes both vector and scalar parameters.

18. (Original) The system as recited in claim 15, wherein the pixel value is a light value that is generated by evaluating a lighting equation using the plurality of parameters.

19. (Original) The system as recited in claim 15, wherein the primitive is a polygon.

20. (Original) The system as recited in claim 15, wherein the means for determining a texture value filters the accessed set of textures to generate the texture values.